Theater Review

Proof

Reviewed by Dave Bayer

Proof
A play by David Auburn
Directed by Daniel Sullivan
City Center
New York, NY

Proof, a play by David Auburn, is a warm exploration of one mathematical family and a mystery about the authorship of one mathematical proof and about the sources, sanctuaries, and emotional risks of intellectual passion in general. It is a rare treat to see the romance of a mathematical proof take center stage in a popular work that teases with our preconceptions without succumbing to stereotype. This review is of the production directed by Daniel Sullivan and staged at City Center in New York City by the Manhattan Theatre Club, running through July 30. *Proof* will open again October 24 at Broadway's Walter Kerr Theatre (`http://www.ProofonBroadway.com/`). One should seize the chance to see it.

Proof is staged entirely on the back porch of an old brick house in Chicago. The set by John Lee Beatty, extending indefinitely to left and right, feels before a line has been spoken as if it has been battered by decades of Chicago's schizophrenic weather. The play opens with Catherine (Mary-Louise Parker) in a midnight conversation, either dream or delusion, with her father, Robert (Larry Bryggman), who died a week earlier at fifty-three of an aneurysm. Robert was a University of Chicago mathematician of startling originality in his youth who soon fell prey to bouts of mental illness interspersed with spells of clarity in which he struggled to reestablish his research. Catherine is a young woman whose apparently similar promise was sidetracked by her decision to live with and

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Mary-Louise Parker as Catherine in "Proof".

care for her father in his last years. She may have a bit of her father's delusional madness or, as likely, an active dream life coupled with a stiff dose of garden-variety depression wholly understandable under her circumstances. In any case, they are not happy campers, but their palpable love has gotten them through the past few years. Robert reappears in flashbacks throughout the play, while the story progresses in the present.

The other two characters are Hal (Ben Shenkman), a former Ph.D. student helped by Robert who now has a teaching position at the University of Chicago, and Catherine's older sister, Claire (Johanna Day), a Wall Street currency analyst who flies in to take care of affairs following their father's death. Hal, a bit smitten by Catherine (as anyone with a pulse would be), has been upstairs sorting through years of Robert's notebooks, filled mostly with delusional scribbling. After an interlude a new notebook materializes, containing an astonishing proof of uncertain authorship. The appearance of this proof wreaks havoc with the three characters still living.

It is altogether too common to see mathematicians portrayed as "the other", set apart in their ways from normal folks, who should feel lucky at not having to pay the heavy price a mathematical gift exacts. The play paints a giant red target as bait for this audience preconception by making

mathematics and madness run together in this particular family, but it is in fact Claire who adopts the role of "the other" on this stage of mathematicians. Yet after having a bit of fun with Claire's view of life as a workweek leavened by hobbies like her fiancé Mitch's vegetarian chili, the play refuses to leave Claire painted into this corner. Claire sees herself as the emotional and financial anchor of a gifted nuthouse family out of touch with the rigors of real life, and in her own way she is just as supportive and sacrificing as Catherine. If there is friction between the sisters, it is because they live in such different worlds. Johanna Day gets these nuances of Claire's character just right.

Ultimately it is this generosity of spirit that is the most lasting impression created by *Proof*. For all of the characters' complexities, talents, differences, and shortcomings, one comes to see the good in each of them. In a play featuring insanity this is a warm and infectious humanizing perspective that can help keep anyone's demons at bay.

Larry Bryggman's portrayal of Robert is less evocative of a mathematician of remarkable talents (Robert's productive years feel to be a distant memory, and he lacks the flicker of extreme originality one might anticipate) than that of a loving father caught in the grips of a debilitating mental illness. Robert's madness is not the romanticized genius treading the thin line with insanity of popular legend, but rather a deceptive normality masking a tragic loss of ability to distinguish reality from intruding delusions. David Auburn continually teases the audience's expectations, and he may seem to leave unchallenged the idea that mathematical talent and mental illness are a natural pairing. However, the play makes no invitation to extrapolate from this family's circumstances. Psychosis is a rare, but unfortunately not too rare, condition. The kind of talent that is the subject of this play is rarer still. Such individuals come in ones, and any improbabilities of the characters here are to be taken as a given.

Could the clouds have cleared for Robert, or, as he puts it, could "the machinery" be working again? As unlikely as this seems, we are presented with a proof that came from somewhere.

Mary-Louise Parker's performance as Catherine is the extraordinary core of this production. She convincingly traverses a two-dimensional parameter space of personas, for she responds differently to each of the other characters at any given time, and she fluidly adopts Catherine's different ages as the play skips about in time. One hesitates to call hers a two-dimensional character for fear of misinterpretation, but one could become spellbound by live theater on the basis of her performance alone. The charged intelligence on display, brought to bear on the craft of acting learned through a lifetime, makes convincing the possibility of

mathematical genius in Catherine's character. It may be equally improbable that Catherine, a college dropout with modest formal mathematical training, could have penned or understood the proof in question, but the existence of such a proof is itself an exceptional occurrence that defies probabilistic reasoning.

Catherine has an unsettling wit, based on a childlike literalness refined to an adult sense for the jugular. She is always stripping away the social conventions of the other characters' utterances, responding instead to the logical kernel of what they said. A capacity for abstraction might have been more conventionally portrayed as social detachment; here, Catherine's continual recentering of discourse onto its true subject is evocative of an uncanny problem-solving ability.

Mary-Louise Parker and Ben Shenkman in "Proof".

Robert, in contrast, engages Catherine in collaborative chains of more formal logical associations and number play, sometimes as a way of stepping around the uncomfortable emotional cores of conversations. He is, after all, a disturbed soul who has tried to decipher alien messages from the numbers on spines of library books. A different mode of problem-solving ability is on display here: As Catherine puts it, Robert slogged at problems from odd angles, but he was so fast at it that it looked magical. Perhaps Robert never fully understood the nature of his talent; for him "the machinery" either worked or it did not, and he spent much of his later years trying to get it to work again. "The machinery" could be mathematics or sanity itself; Robert does not put a fine point on any distinction between the two.

One would do this play an injustice to presume that the activity of mathematics as seen by any one character is accurate or is a view the playwright holds. Like Faulkner's *Absalom, Absalom* or Kurasawa's *Rashomon* or life itself, objective reality takes the form here of a composite of evolving and sometimes contradictory individual perceptions. As Hal, Ben Shenkman's portrayal of a recent graduate student has an edgy verisimilitude. Hal, who is also a musician but no Art Garfunkel, has the hubris both to enjoy life and push forward in his work, but his belief in the necessity of professional mathematical training masks his insecurity that his own might not have been sufficient to insure his success. He sees a landscape where older

mathematicians take speed to keep up with a young man's game in which everyone over fifty might as well teach high school. At twenty-eight his real fear is that if he has not made it yet, he might never make it. Ben's involvement with the proof becomes a life-transforming experience, as a rekindled passion for mathematics makes the particulars of personal circumstance irrelevant.

Catherine sees mathematics through the story of her idol, Sophie Germain, who spent many nights holed up by candlelight in her father's house learning number theory during the French Revolution, much as Catherine has been holed up caring for Robert. Germain's singular gifts notwithstanding, in this view copious quantities of interest and attention brought to bear on a problem are the decisive ingredients in mathematics. Certainly the passage of time is something this house afforded both Catherine and Robert in spades. One longs from the audience for the midnight mathematical solitude of years in this warm but cranky house, out of which the proof in question was born.

As Catherine's house parallels Germain's house, the question of the proof's authorship parallels the question of Germain's gender, which she concealed in letters to Gauss. Catherine either has a talent that outstrips her dad's or a delusional capacity that outstrips her dad's. Catherine has memorized the letter that Gauss wrote Germain on his discovery of her gender (tightened up a bit by Auburn), and Catherine takes this letter as an emblem of affirmation. This affirmation is recited moments before Hal's first kiss, a more sensual affirmation that serves to unhinge any remaining semblance of order in this house.

Emotional truths and mathematical truths are understood by separate means, and Catherine seeks from Hal an affirmation born of faith and trust, not of reason. Before it transforms him too, Hal instead objectifies the starring piece of mathematics beyond the reach of the flesh-and-blood insights and stumbles of its creation. We too cannot know through logic alone what is going on here, yet we know.

This play is ultimately a love letter to mathematics, and one can only respond to its generosity in kind.